REMARKS

In accordance with the foregoing, claims 1, 2, 6 and 7 have been amended. Claims 3, 4 and 5 are cancelled without prejudice and disclaimer. No new matter is presented, and accordingly, approval and entry of the foregoing amendments are respectfully requested.

The following item numbers correspond to the numbered items in the comments of the Examiner in the Office Action.

STATUS OF CLAIMS

Claims 1-7 are rejected.

Claims 1, 2, 6 and 7 are pending and under consideration.

ITEM 3: CLAIM REJECTIONS-35 USC § 112

This rejection is respectfully traversed.

Claims 1-7 were rejected under the second paragraph of 35 USC § 112 for the reasons set forth in item 3. In the embodiment according to claim 1, the modified three-dimensional part model is not partly reprojected but entirely reprojected to generate a modified two-dimensional projection. The word "partial" in "A partial reprojection method", as recited in part in claim 1 results from the fact that the reprojection method of the claimed embodiment does not reproject a modified assembly model but a modified three-dimensional part model to generate a modified two-dimensional reprojection. In order to make this clear, Applicant has amended the phrase "performing the partial reprojection of the shape in a three- dimensional part model", as recited in part in independent claims 1 and 6 to -- reprojecting the modified three- dimensional part model--.

Applicants respectfully submit that claims 1, 2, 6 and 7 comply with the requirements of 35 U.S.C. §112, second paragraph. Accordingly, withdrawal of these rejections under the second paragraph of 35 USC § 112 are respectfully requested.

ITEM 4: CLAIM REJECTIONS-35 USC § 102

Claims 1-7 were rejected under 35 USC $ 102(b) as being anticipated by Unigraphics Solutions (hereinafter referred to as "Unigraphics").

The rejection of claims 1, 2, 6 and 7 are respectfully traversed.

Applicant submits that claims 1, 2, 6 and 7 patentably distinguish over the cited prior art, and that they are allowable for the recitations therein based on the following. That is, Unigraphics does not anticipate these claims based on the following.

Claim 1, as amended recites:

> 1. (CURRENTLY AMENDED) A partial reprojection method for use in a three-dimensional CAD system, the method comprising:
>
> generating a two-dimensional projection by projecting an assembly model;
>
> projection for each part of the assembly model;
>
> **adding in advance, as part information**, attributes of each part of the assembly model to the two-dimensional projection, **the attributes including a line of sight and a position of each part** of the assembly model;
>
> loading a modified three-dimensional part model generated by modifying a shape of a three-dimensional part model that is a part of the assembly model;
>
> **deciding a projecting direction** of the modified three-dimensional part model **based on a line of sight of a part to be reprojected** included in the part information;
>
> **deciding a generating position** of two-dimensional elements of the modified three-dimensional part model **based on a position of the part to be reprojected** included in the part information; and
>
> reprojecting the modified three-dimensional part model to generate a modified two-dimensional projection based on the decided projecting direction and the decided generating position.

(emphasis Added)

In the partial reprojection method according to the embodiment of claim 1, the attributes including a line of sight and a position of each part of the assembly model are, as part information, added in advance to a two-dimensional projection. Subsequently, reprojection is performed by loading the modified three-dimensional part model in which a shape has been modified partly or wholly. Reprojection is not performed by loading the assembly model which has been used for previously generating the two-dimensional projection. The embodiment of Claim 1 produces the advantages that, in the reprojection, both the projecting direction of the modified model to be projected, i.e., the modified three-dimensional part model and the generating position of the two-dimensional elements of the modified three-dimensional part model can be decided accurately with ease, based on the line of sight and the position,

respectively, both being included in the part information added in advance to the two-dimensional projection.

First, a two-dimensional projection is generated by projecting an assembly model. Next, for instance, as shown in Fig. 5 of the drawings, each group is made from two-dimensional elements projected on a two-dimensional projection from the assembly model for each part (denoted by P1 or P2 in Fig. 5) by "grouping two-dimensional elements in the two-dimensional projection for each part of the assembly model", as recited in part in Claim 1.

Further, as also shown in Fig. 5, part information (denoted by A1 or A2 in Fig. 5), including a line of sight and a position of the part, is added in advance to the two-dimensional projection. Fig. 8 shows an example wherein part information A1-1, A2-1, A3-1 and projection information AI, A2, A3 are added to the projection drawing, viz., the two-dimensional projection.

After that, a modified part model P1, i.e., a modified three-dimensional part model P1 is loaded into the three-dimensional CAD system along with the position and posture of the original drawing, viz., the two-dimensional projection maintained as shown in Fig. 4, and subsequently, **the projecting direction and the generating position are accurately decided with ease based on the part information, i.e., the attributes including a line of sight and a position of each part of the assembly model in order to reproject the modified three-dimensional part model P1 onto the original drawing, i.e., the two-dimensional projection**. (Emphasis Added)

Therefore, the embodiment of Claim 1, for example, makes it possible to easily reflect the modified shape in the modified three-dimensional part model onto the original drawing, i.e., the two-dimensional projection to generate a modified drawing, i.e., a modified two-dimensional projection, not by loading the original assembly model, but just by loading the part model, i.e., the modified three-dimensional part model.

In contrast, Unigraphics does not disclose, either expressly or inherently (necessarily), the aforementioned features of the invention claimed in Claim 1.

Unigraphics, at page 280, lines 3-4 states: "part views are associative with the 3-D part or assembly they were created from."

Unigraphics, however, does not specifically make clear the meaning of "associative." Namely, Unigraphics does not disclose as to how the three-dimensional CAD system should be configured in order for the part view to be associative with the 3-D part or assembly.

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In connection with "annotations and associations," Unigraphics, at page 296, lines 4-6 further states, "Annotatiohs can be associative or non-associative. An associative annotation moves when the element it is connected to moves."

Unigraphics, however, does not specifically make clear the meaning of "associative or non-associative" stated therein. Namely, Unigraphics does not disclose, either expressly or inherently, how the three-dimensional CAD system should be configured in order for the part view to be associative or non-associative with the 3-D part or assembly.

With respect to a projection angle, Unigraphics, at page 269, lines 8-10 states, "The projection angle is dependent on the Mechanical drafting standard you use and, typically, once you set the projection angle you will rarely, if ever, need to re-set it."

Unigraphics, however, does not reveal how the projection angle should be decided in the practical reprojection.

As similar elements to the "part information," i.e., "attributes including a line of sight and a position of each part of the assembly model," as called for by Claim 1, Unigraphics, at page 298 discloses a hole table including both a hole size and location. However, the two, i.e., the part information and the hole table are different. The line of sight and the position of each part of the assembly are employed for locating a modified three-dimensional part model, prior to reprojecting it to generate a modified two-dimensional projection, by means of the projecting direction and the generating position that have been decided based on the line of sight and the position, respectively, whereas the hole size and location included in the hole table are utilized not for locating the model but for locating the hole on a model. Differently stated, the "part-information," as recited in Claim 1, is a tool to designate the direction and position of the modified three-dimensional part model itself in the reprojection, whereas the hole table is a tool to designate the hole size and/or location on the model.

In connection with the "part information," as recited in Claim 1, Unigraphics, at page 282, lines 2-3 further states, "you can add dimensions and annotations to orthogonal part views by retrieving them from part models." Unigraphics, however, does not disclose how the projecting direction and the generating position should be decided based on the dimensions and annotations in the practical reprojection.

In connection with the "part information," Unigraphics, at page 271, line 2 from the bottom to the bottom line further states: "you can place driving dimensions and apply relationships to control the size and location of the elements." Unigraphics, however, does not disclose how the size and location should be controlled in the practical reprojection.

A claim is anticipated only if each and every element set forth in the claim is found either expressly or inherently described in a single prior art reference (see MPEP section 2131).

As demonstrated above, Unigraphics states nothing but a general relationship between the drawing, i.e., the two-dimensional projection and the model to be projected in the three-dimensional CAD system.

Accordingly, Unigraphics does not disclose, suggest or teach:

"adding in advance, as part information, attributes of each part of the assembly model to the two-dimensional projection, the attributes including a line of sight and a position of each part of the assembly model",

"deciding a projecting direction of the modified three-dimensional part model based on a line of sight of a part to be reprojected included in the part information", and

"deciding a generating position of two-dimensional elements of the modified three-dimensional part model based on a position of the part to be reprojected included in the part information", as recited in part in claim 1.

Hence, it is respectfully submitted that the reference does not anticipate claim 1.

As for Claim 6, an independent claim relating to a computer-readable medium, the same incorporates all the technical features of allowable Claim 1 therein, and thus, is not anticipated by Unigraphics for at least the same reasons as claim 1 discussed above.

Claims 2 and 7 are allowable at least by virtue of their dependency from allowable Claims 1 and 6, respectively as well as for the additional limitations provided by these claims.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.
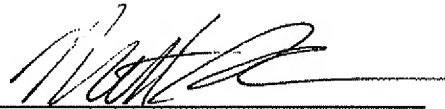
If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: April 28, 2008   By: _____

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